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| 10/706,515      | 11/12/2003  | Fei Luo              | BEAS-1339US2        | 7689             |

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| EXAMINER |
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ZHEN, LI B

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| ART UNIT | PAPER NUMBER |
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2194

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,515

Applicant(s)

LUO ET AL.

Examiner

Li B. Zhen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1 – 18, 21 and 22 are pending in the application.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 27, 2005 has been entered.

#### ***Response to Arguments***

3. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 17 and 18 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

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one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

6. Currently amended claims 17 and 18 recite the new limitation “without requiring a relinking of the application and a vendor software package” [lines 4 – 5]. There does not appear to be a written description of the claimed limitation in the specification as filed.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1 – 18, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,877,163 to Jones et al. [hereinafter referred to as Jones] in view of U.S. Patent No. 6,463,460 to Simonoff.**

9. As to claim 1, Jones teaches the invention substantially as claimed including a machine-readable medium carrying one or more sequences of instructions for dynamically generating a wrapper object [a proxy class that is dynamically generated at runtime; col. 3, lines 5 – 15], which instructions, when executed by one or more processors [col. 4, lines 36 – 52], cause the one or more processors to carry out the steps of:

receiving a class and superclass [client invokes, for example, a Java Class Library (described below) call using a name or other identifier to obtain a class object representative of each desired interface; col. 3, line 63 – col. 4, line 17];

performing reflection on the class to obtain specific extension methods defined within the class [col. 8, lines 5 – 67];

generating a wrapper class as a subclass of the superclass [generating a proxy class 202 and a proxy class instance 204; col. 5, lines 50 – 62];

generating a wrapper object as an instance of the wrapper class by instantiating the wrapper class [client instantiates the proxy class by providing it an invocation handler; col. 3, line 57 – col. 4, line 17]; and

providing the wrapper object to an application program, thereby providing the application program with access [proxy class provides uniform access to the methods of the multiple types of interfaces implemented by the proxy class without regard to the type; col. 3, lines 29 – 43] to specific extension methods [Once a caller has access to the proxy class instance 204, the caller may wish to invoke a method (step 502); col. 6, lines 43 – 63].

Although Jones teaches the invention substantially as claimed, Jones does not specifically teach a wrapper class comprising at least one of vendor specific extension methods from the vendor class.

10. However, Simonoff teaches a wrapper class comprising at least one of vendor specific extension methods from the vendor class [wrapper object provides for an open architecture design so that developing new objects for use with the White Board is

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greatly simplified. Stated another way, the wrapper allows third party objects to simply plug-in to the White Board; col. 16, lines 50 – 57] and providing the wrapper object to an application program, thereby providing the application program with access to vendor specific extension methods [col. 16, lines 21 – 40].

11. It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of a wrapper class comprising at least one of vendor specific extension methods from the vendor class as taught by Simonoff to the invention of Jones because provides a computer system for interconnecting various components efficiently and for enabling those components to collaborate with one another effectively [col. 5, lines 33 – 45 of Simonoff].

12. As to claim 2, Jones teaches the wrapper object is dynamically generated at runtime [col. 2, lines 18 – 33].

13. As to claim 3, Jones teaches the superclass is one of a pre-existing JDBC, JMS, or connector class [col. 4, lines 36 – 52].

14. As to claim 4, Jones, teaches the superclass includes logic to handle server side tasks [dynamic proxy class can be created using interface specifications received from a remote server at runtime; col. 4, lines 21 – 35].

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15. As to claim 5, Jones teaches the wrapper class is generated in bytecode [col. 4, lines 52 – 67].

16. As to claim 6, Jones teaches bytecode is generated for vendor methods not implemented in the superclass [col. 3, lines 29 – 43].

17. As to claim 7, Jones teaches the bytecode is generated using hot code generation [col. 2, lines 18 – 33].

18. As to claim 8, Jones teaches providing the wrapper object to an application program, enables the application program to access standard features defined by the superclass [col. 3, lines 29 – 43 of Jones] and non-standard vendor extensions defined by the vendor defined class [col. 16, lines 50 – 57 of Simonoff].

19. As to claim 9, Jones teaches the standard Java Platform and distributed computing [col. 4, lines 52 – 67] but does not disclose J2EE. However, it would have been obvious to a person of ordinary skilled in the art at the time of the invention that Jones would use J2EE to take advantage of new features provided by J2EE.

20. As to claim 10, Jones as modified teaches a machine-readable medium carrying one or more sequences of instructions for processing an invocation at a dynamically

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generated wrapper, which instructions, when executed by one or more processors, cause the one or more processor to carry out the steps of:

receiving, from an application program, an invocation [a client wishes to make a method invocation for a method of an interface implemented by the proxy class; col. 3, lines 29 – 42 of Jones] directed to a wrapped vendor object [col. 16, lines 21 – 40 of Simonoff];

initiating pre-processing [col. 3, line 57 – col. 4, line 17 of Jones];

calling the wrapped vendor object [col. 3, lines 29 – 43 of Jones];

receiving a result from the wrapped vendor object [invocation handler returns the result to the proxy class instance and then back to the client that made the original method invocation request; col. 3, lines 29 – 43 of Jones];

initiating post-processing [col. 6, lines 43 – 63 of Jones]; and

providing the result to the application [invocation handler 122 then returns the result to the proxy class instance 204 (step 508) which then returns the result back to the caller (510); col. 6, lines 57 – 63 of Jones], thereby enabling the application program to access vendor specific extension methods of the wrapped vendor object [col. 16, lines 21 – 40 of Simonoff].

21. As to claim 11, Jones teaches initiating pre-processing includes calling a pre-invocation handler [col. 3, lines 43 – 49].



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22. As to claim 12, Jones teaches the pre-invocation handler is configured to execute server-side code [col. 4, lines 21 – 35].

23. As to claim 13, Jones teaches the server-side code includes global transaction processing code [col. 3, line 57 – col. 4, line 17].

24. As to claim 14, Jones teaches initiating post-processing includes calling a post-invocation handler [col. 5, lines 33 – 39].

25. As to claim 15, Jones teaches the post-invocation handler is configured to perform post-processing server side tasks [invocation handler 122 processes method invocations made to the proxy class instance 204 and returns a result to the proxy class instance to be returned to the client 116; col. 5, lines 33 – 39].

26. As to claim 16, Jones teaches the post-processing server-side tasks include global transaction management [col. 3, line 57 – col. 4, line 17].

27. As to claim 17, Jones teaches wherein providing the wrapper object to an application program enables the application to access wrapped vendor objects without requiring a relinking of the application and a vendor software package [client does not need to rebuild the proxy class; col. 3, lines 15 – 29].

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28. As to claim 18, Jones teaches wherein calling the wrapped vendor object enables the wrapped vendor object to be processed by the application without requiring a relinking of the application and a vendor software package [client does not need to rebuild the proxy class; col. 3, lines 15 – 29].

29. As to claim 21, Jones as modified teaches a machine-readable medium carrying one or more sequences of instructions for enabling an application program to interface [a proxy class that is dynamically generated at runtime; col. 3, lines 5 – 15 of Jones] with a vendor application, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:

receiving a vendor provided class [col. 16, lines 21 – 40 of Simonoff] used to interface with third party software [a client wishes to make a method invocation for a method of an interface implemented by the proxy class; col. 3, lines 29 – 42 of Jones];

preparing a wrapper object for interfacing with vendor specific extension methods [col. 16, lines 21 – 40 of Simonoff] of the vendor provided class by reflecting [col. 8, lines 5 – 67 of Jones] the vendor provided class and a superclass to form a wrapper class from which the wrapper object is instantiated [col. 3, line 63 – col. 4, line 17 of Jones]; and

providing the wrapper object to the application program [proxy class provides uniform access to the methods of the multiple types of interfaces implemented by the proxy class without regard to the type; col. 3, lines 29 – 43 of Jones], thereby enabling

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the application program capability to access vendor specific extension methods of the vendor application using the wrapper object [col. 16, lines 21 – 40 of Jones].

30. As to claim 22, Jones as modified teaches a machine-readable medium carrying one or more sequences of instructions for processing an invocation at a dynamically generated wrapper [a proxy class that is dynamically generated at runtime; col. 3, lines 5 – 15 of Jones] enabling an application program to interface with a vendor application, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:

receiving, from an application program [a client wishes to make a method invocation for a method of an interface implemented by the proxy class; col. 3, lines 29 – 42 of Jones], an invocation call directed to a wrapped vendor object [col. 16, lines 21 – 40 of Simonoff];

calling the wrapped vendor object [col. 3, lines 29 – 43 of Jones];

receiving a result from the wrapped vendor object [invocation handler returns the result to the proxy class instance and then back to the client that made the original method invocation request; col. 3, lines 29 – 43 of Jones]; and

providing the result to the application program [invocation handler 122 then returns the result to the proxy class instance 204 (step 508) which then returns the result back to the caller (510); col. 6, lines 57 – 63 of Jones], thereby enabling the application program to access vendor specific extension methods of the wrapped vendor object [col. 16, lines 21 – 40 of Simonoff].

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**Conclusion**

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768.

The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner  
Art Unit 2194

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